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ABSTRACT

This paper reports the implementation of teacher-made, early education screening practices and materials for identifying pre-kindergarten and kindergarten children with developmental risks. A total of 105 children were screened in the spring of 1979 using screening tests devised by the researcher, another kindergarten teacher and a special education teacher. Children were assessed in 15 skill areas, including visual and auditory memory, closure and comprehension, language, gross motor balance, self control, cognitive ability, visual and auditory discrimination, fine motor skills, laterality, and body image. Those children scoring poorly in an area, or areas, were rescreened in the fall of 1979. Children scoring consistently below average were observed in the classroom to determine if further diagnosis was necessary. Nine of 43 children were referred for diagnosis. It was found that a child who performed low in certain skill areas as measured by the screening device, exhibited deficiencies in the same skill areas in the classroom. Of the nine students diagnosed, five whose evaluations had been compelted showed similarities in screening and diagnostic test performance. However, it was found that poor test scores may not indicate a typical learning problem. Validity of the screening device is discussed. Brief profiles of the five diagnosed children are provided. (Author/RH)

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SCREENING AND ASSESSMENT OF KINDERGARTEN CHILDREN WITH DEVELOPMENTAL RISKS

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INTRODUCTION

a. PROBLEM

Do the early childhood screening tests administered to prekindergarten and kindergarten and young kindergarten children appropriately measure areas that would indicate a weakness, a learning problem, a learning disability or a maturation lag? Do the tests accurately assess areas that are in need of further diagnostic evaluation? Do the tests accurately measure areas that compare favorably with the results of the diagnostic evaluation?

b. HYPOTHESIS

Because of background readings in the research on kindergarten screening programs, personnal experience in the field of early childhood screening programs, work with children with special learning disabilities and problems, and experience with maturation lags, an appropriate screening devise has been written to identify those children in need of further diagnostic evaluation for the purpose of remediation and problem treatment.

c. SIGNIFICANCE OF PROBLEM

Children entering first grade from a kindergarten program are followed by a record and some background information on the child's behavioral and growth observed in the kindergarten program. Children entering kindergarten enter with no such background information. Kindergarten teachers often grope along for weeks trying to assess the child's skill. Precious time is lost in testing these children before they can be placed in a group for skill work and given tasks for individual needs.

For most handicapped children, services do not become available to them until they have entered first grade or later, and have met with considerable failure. According to one study, it is estimated that nationally, 12,05%

of the preschool children are in need of special education or related services. (Schennum, 1978). In a study by Meier, (1973), as much as one-third of the students in the school system are experiencing school difficulties and are rated as non-achievers. Much talent has been lost because the problems have existed for a period of time and have gone undetected thus manifesting more difficulties and problems.

Therefore skill areas are in need of assessment. Through special education recommendations, research done in the field of screening programs, and work with specific testing materials, the following areas were considered mandatory for a comprehensive screening program: Auditory memory and discrimination; visual memory and discrimination, fine and gross motor control, self-control, cognitive skills (which includes math skills) language and body image.

d. PURPOSE OF THE STUDY

There are three steps that can be taken when developmental problems in a preschool and kindergarten population. First, we can ignore the situation. Secondly, we can wait until the problem has manifested into school failure for the child. Thirdly, we can devise screening methods that will help to determine the child's strengths and weaknesses and determine if further diagnostic evaluation is necessary. The researcher feels that if a child is detected early enough, certain steps may be taken to minimize or completely stop the growth of a learning problem. Possible detection may avoid the emotional complications that go hand in hand with the learning problem.

Because of these feelings, the tests have been administered. Are they adequately measuring are goals? Is this early detection accurate and fair? Is this the proper screening devise for measuring learning problems and not just maturation lage?

e. LIMITATIONS

A child that scored poorly on a skill area may have done so as a result of the testing situation. The child's feelings towards the test administrator, the fact that the child is new to the testing situation, and that he may not have understood what was expected of him could invalidate a child's test score.

A maturation lag may be the cause of poor test scores. Rescreening is extremely important for valid scores.

Terms and phrases in the screening caused test scores to be invalid for some children. Test results must look at this misunderstanding to be valid.

Diagnostic evaluation have only been completed in five out of nine cases. This is not enough for the tests to be considered accurate and valid.

f. DEFINITION OF IMPORTANT TERMS

Screening: initial steps in determining if a child is developing according to normal patterns or if he manifests areas of weakness which suggests the need to conduct a complete diagnostic study of the potential problem.

Rescreening: For children who fail the screening process or whose performance is questionable in one or more area of the screening, rescreening is conducted.

Diagnoses: complete study of the child to determine if he is eligible for intervention or special attention in programs.

EMR: educabally mentally retarded

Support Systems: includes the school psychologist, the learning disabilities teacher, the special education resource room teacher and the behavior disorder teacher.

Young/pre-kindergartener: any child tested before entering the kindergarten setting in September.

Kindergartener: any child who is five on or before October 31st of the year he will enter kindergarten.

2. REVIEW OF RELATED LITERATURE

The researchers feel it is important to review literature on screening programs and their validity that represents both sides of the issue. Numerous pros and cons discussed in the literature review are repressed in the screening program that is the subject of this paper.

Joseph Renzulli noted in his article on first grade screening tests (Renzulli, 1971), that Bloom stated that 50% of mature intelligence is achieved by the age of four. Eighty percent of mature intelligence is achieved by the age of eight. Therefore, limited experiences and deprivation in the first four to five years of life has a great consequence. Renzulli used the First Grade Screening Test (FGST) in hopes of helping the young child avoid an unsatisfactory learning experience. He felt that children who experience this disatisfaction can be adversely affected in their future school experiences and their self-concept as a successful learner is marred.

Barbara Keogh (1973), feels that the conditions that the screening tests defines is seen as already existing. Therefore the sooner the treatment is begun, the greater the chance that treatment will have a significant impact. Keogh reports that many fields of study identify children for a variety of conditions to minimize problems. Doctors make up a large portion of this population. PKU (phenylketonuria) is diagnosed as an early age to prevent further retardation. Therefore, early identification of a condition of exceptionality or a condition and implementation of a treatment is crucial to prevent further retardation. Keogh does warn the tester against incorrect terminology. When screening tests seek to identify preschool children, the tester is hypothesizing rather than confirming a specific disability. This disability, which may lead to school failure has not yet developed, as the child is not in the school classroom. There

must be concern with the condition that will develop.

Keogh feels that if early identification and remediation are implemented successfully, the high risk child would receive the type of attention and help needed to achieve in the classroom. This identification can change the child from high risk to a successful school achiever.

Tauber (1967) conducted a study with 30 kindergarteners, 15 boys and 15 girls. Children were given the Peabody Picture Vocabulary Test, Auditory Discrimination Test, Verbal Language Test, Development Scale, Knox Cube Test, Marianne Frostig Developmental Test of Visual Perception and the Goodenough Draw-A-Man Test. Through the screening process 12% of the children were found to have a learning deficiency or a learning disability in one or more of the assessed areas. Through assessment, Tauber feels it should not be assumed that evidence of a weakness in an area is the cause of a learning disability. Rather, environmental factors and the child's inherent personality must be considered.

In an article in the Journal of Special Education, (Keogh, et al., 1970) it is noted that there is a general agreement that most learning problems do not develop suddenly. Fitzsimmons stated that a substantial number of high school underachievers and dropouts showed signs of learning problems by third grade.

Barbara Keogh (1970), restated her philosophy in an article in the Journal of School Psychology. Keogh followed subjects from kindergarten through the regular elementary school program. She used teacher observation and the Bender Gestalt to show that such screening and observation can identify a high potential child. Twenty of the 49 children rated high or low extremes of reading readiness. Eighteen (90%), of those identified achieved in the predicted direction. Keogh states, however, that the results can be interpreted to lend support to the suggestion, rather than

to the pupil performance as responsive to teacher expectations. Difficulties and conditions may be improperly diagnosed due to different maturity rates, pedagogy and motivational variables.

Research points out other faults to early identification programs. Boehm, in an article by Alan Kaufman, (1978), found children from disadvantaged backgrounds tend to have difficulty with numerous basic concepts. These concepts, such as below, now, beginning, can hinder the preschool child's understanding of what is expected of him, and possibly invalidate the score. In Kaufman's study, he used the Boehm Test of Basic Skills and found two-thirds of the middle class children tested in the beginning of kindergarten knew the meaning of such terms as "top, other and row", while even fewer in the lower socio-economic class understood the concepts. The Boehm test was not the only instrument to expect children to understand certain concepts. The McCarthy Scales of Children's Abilities had seven concepts, the Stanford-Binet Intelligence Scale had five concepts and the Wechsler Preschool and Primary Scale of Intelligence had 14 concepts. Only the Illinois Test of Psycholinguistic Abilities assumed no understanding of concepts. Kaufman notes that if the test administrator makes sure the child understands what is expected of him, before beginning the screening process, the tests become more valid.

Children with a slight hearing loss or an auditory perception problem and even a speech problem may fail to understand some verbal concepts in the directions. There is then a questionable validity of these children and tests do not accurately assess their nonverbal intelligence.

Cronbach and Snow (1977), found data that challenged the validity of reasoning and classification tasks for come children. They found that low-scoring children can often improve their performance markedly on tasks, after being given simple orientation exercises to clarify what is

wanted. Therefore, before the test is to be administered, children need to be taught concepts needed to understand the tasks.

Flynn and Flynn, (1978), feel that children during the five to six year range are in a state of flux. Because of this flux, differing rates of development, demonstrated by children, may not have a strong relationship with later achievement. A young child lagging behind in developmental areas may not have this lag in second grade. Supporting this contention is the research which shows an insignificant relationship between the Slossen IQ and later achievement measures.

To add credance to Flynns' report, Keogh (1973), cautions making predictions about any child unless there is a severe disability. Children vary in relation to the learning task and situations. Thus, there may be many facets of the child's development that is directly related to the tasks to be learned.

3. Design of the Study

An initial population of 105 children were given the screening test in the spring of 1979. Of those 105 children, 43 children were placed in the same kindergarten classroom. Of these 43 children, 9 children scored well below their age level in eight of the skill areas.

Children in the classroom come from a variety of backgrounds, but the majority of them come from the lowest socioeconomic home. These backgrounds include welfare people, children from broken homes and those from very large families. It should be noted that two of the nine children in this study did attend Head Start before entering the public school system.

Because these nine children scored poorly on the initial screening, and there was a question of the child's test performance and the need for further diagnosis, each child was rescreened 16-13 weeks later. This rescreening was conducted two to four weeks after the child had entered the kindergarten setting. The rescreening was conducted to see if the child had possibly misunderstood the testing situation or if there was a need for further diagnosis. For those children that did not participate in the initial screening process, they were evaluated four to five weeks after entering kindergarten. The average age of the child on the rescreening test date was five years old.

METHOD OF TESTING

Each child was individually screened. Using the printed test, (see appendix), the test administrator gave the child various tasks to complete and recorded the child's results and answers in the spaces provided.

There are fifteen skill areas that the child was assessed in. The child was either marked in the age level that the test results feel in or the skill was marked as mastered, near mastery or skill not learned. The fifteen areas and their descriptions are as follows:

Visual Memory: The child is shown a series of blocks for six seconds. The blocks are then removed from the view of the child and the child is required to reproduce the exact pattern with his own set of blocks. Two correct patterns consist of mastery in the 4-5½ year level. Three correct answers consist of mastery in the 5-5½ year level and four correct answers consist of mastery in the 6 year level.

Closure and Comprehension: The child is asked a series of questions at the 3½, 4, 4½, 5plus and 6 year level that must be answered with an appropriate response. The child's answer is recorded in the space provided. At the 5 year plus level, the child is required to fill in the blank with an appropriate response.

Language: The child is graded on the 4, 5, and 6 year level by the correct, or appropriate, response to the statement. The statements consist of a series of fill in the blanks to form an antipode.

Balance (Gross Motor): The child is timed while maintaining a standing balance on each foot without moving that foot from the original position. The eyes remain open throughout this task. Three to five seconds equals a 4½ year level; six to eight seconds equals a 5 year level and nine plus seconds equals a 6 year level.

Self-control Indicator: The child is shown a large sheet of posterboard. In the upper right hand corner is a picture of a dog. In the lower left hand corner is a picture of the dog's house. The child is asked to use his/her fingers and walk the dog to the dog house. The child is timed from the moment his/her fingers touch the upper right hand corner of the paper and the timing stops as soon as his/her fingers leave the paper. Three to five seconds indicates poor self-control; five to ten seconds indicates possible problems in self-control and ten plus seconds indicates adequate self-control.

Cognitive: The child is asked questions that deal with his/her personal life. He/she is also asked to count rote, count objects, and identify colors. On the original test, childrer were asked to identify their numbers from one to ten. Because of the time factor involved in administering the test, this was dropped and will be eliminated from the test altogether when the test is administered again.

Visual Discrimination: The child is shown a shape or letter and is asked to find that shape or letter in the row beside it and draw a circle or mark around the correct shape.

Auditory Discrimination: The child is verbally given two words. He/she must tell the administrator if the words are the same or different. There are ten sets of words and three errors consists of non-mastery. The test is considered invalid if the child says that such words as "chew-chew" and "lake-lake" are different.

Auditory Memory: The child is given a series of numbers, from two numbers to a series of six numbers, and is asked to repeat the numbers back in the same order. Mastery of the tasks consists of repeating four numbers in the correct order.

Fine Motor: The child is given a pencil and is asked to draw a line between two straight lines and then between two curved lines. The child is also asked to color a predrawn figure and to write his/her name. Mastery of fine motor skills is determined if the child can stay within the lines drawn when making a path, if he can color within the lines and if he/she can write his/her name. The child is also asked to reproduce shapes that can be seen. Mastery of the skill is considered if the child has appropriately reproduced the shapes.

Laterality: The child is asked to perform certain tasks such as picking up a pencil, kicking a ball and hopping on one foot. This test is to determine

if laterality has been established. The task is either mastered or the skill is not learned.

Body Image: The child is asked to draw a picture of him/herself. The child is graded on this according to the picture drawn. Any picture closely resembling a body image is considered mastery. Those graded as nonmastery or with poor body image have drawn just a line or have scribbled in the space provided.

The screening test was compiled and written by the researchers, another kindergarten teacher and the school's special education teacher. The tests were chosen from a variety of sources which included: the Daberon, a screening device for school readiness, Boehm Test of Basic Skills, the Early Identification and Instructional Program for Anne Arundel County School in Maryland, and the Kindergarten Assessment Profile and Skills Survey. These assessment materials included the areas that were used in the screening device described above. A draw-a-person test was also included as the creators of the screening device felt this could show a stage of development in the child.

4. PRESENTATION AND ANALYSIS OF DATA

Of the original 43 children placed in kindergarten, fifteen scored poorly or below their age level on the initial screening done in May. Rescreening was conducted sixteen to eighteen weeks later on these fifteen children and only nine scored consistently below average or below their age level expectancies.

For the six children whose scores improved, there appears to be a vareity of reasons for the differences in scores on the initial screening evaluation and the rescreening. Possibly the child did not understand what was expected of him in the testing situation. The child could have been frightened of the test administrator and his shyness could have invalidated his score. The child may not have understood certain concepts that were asked of him, thus incorrectly responding to the task and invalidating his score. Due to the child's background, the child may have been unfamilar with certain tools that were used in the testing situation, such as pencils, and therefore could not complete a task correctly. The child may not have had any experience with certain tasks that were asked of him, such as drawing a picture of himself, and therefore the task would have been marked non-mastered. A speech problem or a temporary or permanent hearing loss could have caused the child to not understand the verbal direction. The initial screening was conducted with many around. This could have distracted the child's attention thus invalidating the child's score. The most important finding of the differences in the screening and rescreening scores could lie with a maturation lag. Because parents were present during the initial screening, they were able to see skills and tasks the child could and could not perform. There was a waiting period of four to five months before the child was tested again. Parents may have worked with their child in the deficient areas before school begin in September thus raising the child's scores. As, in the case of balance and fine motor skills, the child may not have been developmentally able to perform the task at the mastered level in May, but by the time school began, the child may have closed the gap in his development.

Before rescreening was administered in the fall, children were introduced to a variety of concepts in the school setting, such as cutting, coloring, gross motor movement, language skills, counting, fine motor skills discrimination and memory skills. Possibly this skill work could have made the child familar with the concepts that were on the screening device, thus helping to raise the child's screening score in the fall.

The nine remaining children that are the subject of this paper, were given the same amount of instruction as those who's score was considered average or above average. The skills were not isolated to a certain population in the researcher's classroom, but were an integral part of the kindergarten curriculum. When re-screening was given again, these nine children's scores changed little from the test results in the spring. It could be said that these poor test results are based on a maturation lag. If this is true, then immaturity must be considered as much of a learning problem as a learning disability would be. If this maturation lag is present now, it may remain with the child throughout the school experience and intervention is crucial for these children as for those who prove deficient in skill areas due to learning difficulties.

These nine children have been observed in the classroom to determine if the test results are a true and valid indication of the child's performance level. These skill areas have been informally assessed through various tasks. To date, it has been found that where the child performed low on the screening device, he has also shown deficiencies in these skill areas in the classroom. Various materials have been used to validate these findings and the results are consistant with the screening results.

To further validate the screening and rescreening scores, the nine children have been referred for further diagnostic testing by the school psychologists, the learning disabilities teacher, the behavioral disorder teacher and the special education instructor. Unfortunately, at the time of the writing, only five children have completed the diagnostic evaluation. The remaining four children are in the process of being screened for diagnostic testing and their results will not be

completed until later in the school year.

Of the five whose evaluation has been completed, there is a strong relationship in the screening scores and the diagnostic evaluation results.

Billy: Billy's screening score lie in the three to four and a half year level or the skill not learned area. Only one area was considered near-mastery and that was in color recognition. The diagnostic testing and the results indicate that Billy is in the EMR range of development. Billy's I.Q. has been assessed as 55-65. He is developmentally 1½ to 3 years behind his chronological age of 5½. Because of the severity of Billy's disability, he has been placed in the special education resource room for one hour a day and remains in the classroom the rest of the day. It has been suggested by the psychologist that Billy remain in kindergarten another year before being promoted to the first grade. There will be an increase in the time Billy spends in the special education room as his attention span increases and some areas of development have been established. The only discrepancy between the scores on the screening evaluation and the diagnostic evaluation is in the area of language. On the screening, Billy performed in the four year range. When diagnostically tested, Billy performed in the five year range on the Peabody Picture Vocabulary Test. This discrepancy may be that in the screening situation, Billy was required to verbally perform the task at hand. On the Peabody, Billy was only required to point to the correct answer. Therefore it might be concluded that Billy lacks labeling skills when asked to verbally respond to a task.

John: John has completed the psychological testing and the results indicate John has a severe learning disability in the cognitive, discrimination and memory skills. The evaluation from the psychologist and learning disability teacher match the results of the screening device. The evaluation stated that John's strongest areas included language, closure and comprehension and that laterality had been established, as did the results of the screening. The diagnostic

evaluation states that John will be placed in the special education resource room for part of the day and remain in the classroom the remainder of the time. It must be noted that this is John's second year in kindergarten. He was not given the initial screening in May, but was tested in October of the school year. Therefore, John has shown that even with a certain amount of intervention, a child's scores may not be raised if there is a true disability present. John understood what was expected of him in the testing situation as these concepts have been taught in the classroom during the year.

Crystal: This is also Crystal's second year of kindergarten. Her diagnostic evaluation results also concur with the results of the screening test results. Crystal's I.Q. is in the 65-75 range. Her weaknesses have been assessed in the areas of cognitive, discrimination, memory and fine and gross motor skills. Closure, comprehension, language and laterality have been mastered, but are still six months below her chronological age. Crystal has also been placed in the special education resource room for one hour a day and remains in the classroom the remainder of the day. There is a discrepancy in one area of the screening tests results and the diagnostic evaluation. When Crystal is asked to verbally respond to a question that has a specific answer, her language skills are in the 5½ year range. On the psychological evaluations, Crystal performed well below average in language due to the nature of questions. When asked to label an object, Crystal was found to name the object very inappropriately. For example, when asked what we put on cookies we frost, she said icicles instead of icing. Yet on the screening test, she was able to fill in the correct response to the antipode. Such a discrepancy needs further evaluation for the screening device. We possibly are not assessing all areas of language.

David: David's background plays an important role in the screening and diagnostic results. David scored low in 12 of the 15 assessed areas of the screening device. His scores are not as low as others in this study, but those areas indicate problems of a different nature. In some areas, David only showed a lag of six

months, but in the areas of language, balance, self-control, color recognition, auditory memory, laterality and body image, David scored two to two and one-half years below his chronological age. Observation of David has shown that he has a severe behavior problem and lacks the skills for mastery in the fine and gross motor areas. Background information is important to understand these results. David comes from a long line of child abuse and neglect. His background is one of deprivation and David has not had the experiences that many children have had. He was forced to remain in a crib until he was three-years-old and was not given manipulatives and experiences of socialization. David has been forced to live in a home where there is much discord resulting in loud noises and uncertain disciplinary tactics. David's psychological evaluation has not been completed at this time, but his evaluation by the behavior disorder teacher has. David suffers from a very poor self-image and lack of social skills. This, has in turn, resulted in poor performance levels for David in the structured school environment. David lacks self-control that will allow him to remain at a task for long, thus instructing hims has been a difficult task. David is now working with behavior modification in the regular classroom to improve his attention span, self-control and social skills. The screening device helped to determine that David's problems may not be so much a result of a learning problem as it is an emotional problem. Possibly without the screening device, David may have been inappropriately labeled with a learning problem rather than with a behavior problem.

Leonard: Leonard's screening results and diagnostic evaluation results are consistent. Leonard showed a lag in memory, discrimination, fine and gross motor and language, closure and comprehension in the screening and did so in the diagnostic testing. The psychologists report states that Leonard lacks language skills for labeling which may be a result of his speech disability. This area in particular is being further diagnosed through tests that allow Leonard to point to an answer rather than to verbally respond. The report indicates that Leonard has a variety

of learning problems that constitute learning disabilities. His I.Q. has been assessed in the 75-85 range and placement in special education is pending a parent conference. Unfortunately, the school psychologist was unable to determine if skill intervention will raise Leonard's scores in the future and further evaluation will done on him in the spring.

As stated before, the remaining four children have not completed the diagnostic evaluation, therefore predictions of similarities between the screening results and the diagnostic evaluations can not be made at this time. Classroom observations indicates that the child's school performance and screening results are consistent.

The test results from the screening appear to be valid and useful, at least in determining a child with learning problems. Although only 5.3% of the children screened have shown this deficit in learning, and the national average of learning disabilities ranks in the 12% range, the finding are still significant enough to further use the screening device for kindergarten populations.

3. Summary and Conclusions

a. Restatement of the Problem

So the early childhood screening tests administered to prekindergarten and young kindergarten children appropriately measure areas to indicate a weakness, learning problem, disability or a maturation lag? Do tests accurately assess areas in need of further diagnostic evaluation? Do the screening test results compare with the results of the diagnostic evaluation?

b. Description of Procedures Used

Children were screened in the spring of 1979 using the screening tests devised by the researchers, another kindergarten teacher and the special education teacher. Those children scoring poorly in an area or areas were rescreened in the fall of 1979, four to six weeks after entering the kindergarten classroom. Those children whose scores were consistently below average in the initial screening and rescreening were observed by the researcher in the classroom to determine if further diagnostic evaluation was necessary. In the case of nine out of 43 children, this further evaluation deemed necessary, and the child were referred to the various support systems for testing. Results on five of the nine children were completed and reviewed earlier.

c. Principal Findings and Conclusions

A number of findings and conclusions are a result of this study on the screening of prekindergarten and kindergarten children. It must be noted at this time that five to nine children out of 43 is not a strong enough majority to validate the true usefullness of the screening device. It is the researcher's feeling that the test results need to be studied over a period of years to see if there is consistency in the projected outcome. One year is not enough time, nor a broad enough sampling of children to validate the continual use of this particular screening device.

The purpose of the identification process is not to document or confirm or to prove deficits, but to provide information which might be used as a basis for prevention of later learning problems and school failure. Therefore, teachers must take caution in stigmatizing the child whether the test results prove positive or negative. Teacher expectations play an important in the child's success in school. Because the act of predicting learning problems may have a built in expectancy level, certain concern may lead to overemphasis upon certain abilities or inabilities, and result in teacher and child anxieties which effects motivational aspects of development. Because teacher anxieties upon a child are uncertain, the possibility that the expectancy attitude upon the child can harm the child, then prediction may be harmful.

It appears that poor scoring in tasks given to the child may not show a typical learning problem. In David's case, his inability to complete tasks satisfactorily did not necessarily prove he had a disability. David's results showed that there are many facts that are directly related to the child's developmental rate and his performance on school related tasks. David's diagnostic results showed that David is intellectually capable of tasks, but emotionally he is blocked from being successful. David could possibly have been improperly labeled in the school setting had not teacher observation been used and the proper support system (behavior disorder teacher) been called in for diagnostic evaluation. Therefore, the test administrator must be aware of the many facets of a child's background before proper assessment is valid.

A great many of the initial population of 105 prekindergarten and kindergarten children did not understand certain concepts and skills asked of them. Many did not understand the concept of "same" and "different." Although test

administrators demonstrated the concept to the child, many still did not have the background to grasp the task at hand. This theory held true when words such as hopping, kicking, standing on one foot, were used to describe the tasks to the child. Again administrators were required to show the skill, before the child attempted it. The creators of the screening device need to look at the research done by Alan Kaufman, (1978), and alter the screening device by eliminating the possibility the child does not understand what is being asked of him. Such lack of understanding on the part of the child will invalidate the child's score.

Certain phrases used in the screening brought invalid results. In the area of closure and comprehension, on the four year level, the child is asked, "why do we have houses?" For children that have always lived in a trailor, this question is unfair. When asked, "why do we have cars?", a child from a disadvantaged background may not have the experience of cars in his realm. Also, a child with only trucks in his background, may not be able to answer the question appropriately.

In the assessment of language skills, the child is asked to complete the blank in the statement, "you eat breakfast in the morning and dinner at _____." Dinner is some cultures refers to lunch and in others it refers to the evening meal. This cultural difference and others, must be taken into consideration for test results to be valid.

It was found by the researcher that test results varied from the initial screening done in May and those done 16-18 weeks later. As Bloom proposed in 1968, children can master tasks after sufficient time, materials and teaching strategies. Six children out of the initial fifteen involved in the study showed significant improvement in their test results. Their improvement may be the result of several factors. Experience in the school setting may have introduced understanding of the concepts of skills to the child. Therefore, before a child is labeled, he must be given intervention and remediation in skill areas. Disadvantaged children may not have

experiences in using pencils, crayons, and drawing themselves appropriately. These experiences must be given to the child to assess the test results and have valid scores.

The difference in scores of the tests may have been a result of a maturation lag. Developmentally, a child may not have been able to hop on one foot. But, 4 months later, he is able. This lag must be taken into consideration for valid results. As stated previously in this paper, parents were present during the initial screening and observed the tasks asked of the child. Possible remediation on the part of the parent during the summer months could have raised a child's score. This is another important reason children must be given a chance and the experience with skills so that it is known that the child understands what is being asked of him.

Is the screening test used in this study useful for identifying children with learning problems and disabilities? Because of the numerous limitations evident in this screening device, the assessment needs certain remediation. Should these improvements occur, the test scores would be more accurate and valid. If consideration for maturation lags, emotional problems and lack of understanding of the tasks to be performed is used, the screening program can accurately assess the child's abilities. Rescreening is extremely important and teacher observation necessary. Without these, a child may be improperly labeled, be unnecessarily given diagnostic testing and loose a lot of time in remediation programs in the classroom that are not needed.

The researchers realize that five out of nine diagnostic evaluations is not enough to fully validate the screening device. Yet three of those nine children involved in the study are repeating kindergarten and their teacher last year did not feel that diagnostic evaluation was important or necessary. If those three children had been screened last year and given the diagnostic testing, possibly months of school failure and frustration could have been eliminated from these children's lives.

At this time, it appears that much of the validity of the screening device depends on the results of the remaining children's diagnostic evaluations. Should their results not coincide with the screening results, the validity of the test will be in jeopardy. Should the results be comparable, the screening test may be valid in determining certain school failures.

G. Recommendations for Further Research

To truly validate the screening and assessment of kindergarten children, their test results and school relationships must be followed for several years following kindergarten. For those children weak in an area and not diagnosed by the school support system, there must be a follow-up to determine if that area is still weak after several years in school. Lack of skill knowledge, emotional problems, poor experiences in the child's background, a hearing loss or a speech problem can adversely effect the test results and the labeling that follows those results.

Are teacher expectations being determined by the results of the screening? Is a child stigmatized when he/she has scored poorly in one or many areas of assessment? Further research is needed to determine if the child is hindered or helped by the screening if the classroom teacher is aware of the results.

If the screening proceedure is identifying the special child, is it identifying the gifted child or even properly assessing the skills of the "middle" child? Further research is needed to determine if the test is accurately assessing the entire kindergarten population.

And finally, if we do find the tests to be valid, are teachers adjusting their curriculums to meet the needs of the children? If the screening is only used to pinpoint children in need of special education or behavior intervention, then the screening device is useless. If the screening indicates a child's strong area, a curriculum must be changed so the child is not given remediation in an area that does not need it. Further research is needed to determine if a teacher is putting the test results to use in determining her curriculum and her goals.

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A. APPENDIX